

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-21 are currently pending. Claims 1, 7-9, 15, and 16 have been amended; and Claim 21 has been added by the present amendment. The changes and additions to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by the Rhodes et al. reference (“Remembrance Agent: A Continuously Running Automated Information Retrieval System”); Claims 2-4, 17, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Rhodes et al. reference in view of U.S. Patent No. 6,094,681 to Schaffer et al. (hereinafter “the ‘681 patent”);¹ Claims 5, 6, 18, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Rhodes et al. reference in view of the ‘681 patent, further in view of U.S. Patent No. 5,974,412 to Hazlehurst (hereinafter “the ‘412 patent”); Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘412 patent in view of the ‘681 patent; Claims 9 and 12-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘681 patent in view of the Lachman reference (“Animist Interface; Experiments And Mapping Character Animation To Computer Interface”), further in view of U.S. Patent No. 6,070,158 to Kirsch et al. (hereinafter “the ‘158 patent”); and Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘681 patent, the Lachman reference, and the ‘158 patent, further in view of the Horvitz et al. reference (“The Lumiere Project: Bayesian User Modeling for Inferring the Goals and Needs of Software Users”).

¹ Applicants note that the Office Action on page 4 appears to incorrectly list Claims 5, 6, and 20 as also being rejected on this basis.

Amended Claim 1 is directed to an information processing apparatus, comprising: (1) an event occurrence detection device configured to detect an occurrence of an event; (2) an extraction device configured to extract attribute information and a keyword from a first document corresponding to the event, the attribute information and the keyword being extracted from different portions of the first document; (3) a search device configured to search a database using the extracted attribute information and the extracted keyword to retrieve a second document having matching attribute information having similarity to the attribute information extracted from the first document **and** the second document containing the extracted keyword; and (4) a display control device configured to display associated information corresponding to the second document. The changes to Claim 1 are supported by the originally filed specification and do not add new matter.²

Applicants respectfully submit that the rejection of Claim 1 (and all associated dependent claims) is rendered moot by the present amendment to Claim 1.

The Rhodes et al. reference is directed to a program called the “Remembrance Agent” (RA) that augments human memory by displaying a list of documents that might be relevant to the user’s current context. In particular, the Rhodes et al. reference discloses that the RA runs continuously in the background without user intervention, and every few seconds collects text within certain ranges around the current cursor position and sends the text to an information retrieval program. Further, the Rhodes et al. reference discloses that the information retrieval program produces suggestions of similar documents from the pool of documents that are pre-indexed on a nightly basis and that a line of text is presented to the user indicating various information about a document that could be relevant to the user’s current context. In particular, the Rhodes et al. reference discloses that the suggestions presented to the user are kept to a single line each, and are always printed at the bottom of a

² See, e.g., Figure 5 and page 22, lines 10-20 in the specification.

text editor window. In particular, Applicants note that the Rhodes et al. reference discloses that the basis for selecting a document that might be similar to the user's current context is "...document similarity based on the frequency of words common to the query and reference documents."³

However, Applicants respectfully submit that the Rhodes et al. reference fails to disclose a search device configured to search a database using the extracted attribute information and the extracted keyword (the attribute information and the keyword being extracted from different portions of a first document) to retrieve a second document having matching attribute information having similarity to the attribute information extracted from the first document and the second document containing the extract keyword. In particular, Applicants respectfully submit that the Rhodes et al. reference is silent regarding a search device that finds attribute information having similarity to attribute information extracted from the first document, as well as the second document that contains the extracted keyword, which was extracted from the first document. Rather, the Rhodes et al. reference merely discloses that the basis of a similar document is the frequency of words that are common to two documents. On the contrary, Claim 1 requires matching both attribute information of a first document and a second document, and matching a keyword that is in the first document and also in the second document.

For the reasons stated above, Applicants respectfully submit that the rejection of Claim 1 is rendered moot by the present amendment to Claim 1, and that Claim 1 patentably defines over the Rhodes et al. reference.

Amended Claim 7 is directed to an information processing method for an information processing apparatus for detecting the keyword from a text file corresponding to an event that has taken place and displaying association information corresponding to said keyword,

³ See Rhodes et al. reference, page 122, right column. Emphasis added.

comprising: (1) extracting attribute information from an existing text file; (2) extracting existing keywords from among words contained in said existing text file; (3) computing weights for said existing keywords based on use of occurrence frequency in the text file, and acquiring associated information for **each** important keyword of the existing keywords having a weight higher than a predetermined threshold, the associated information being obtained by accessing a search engine on the Internet using each important keyword as a search term; (4) constructing a database by associating **each** important word with at least one of said attribute information extracted in the extracting step and said associated information acquired in the acquiring step; (5) detecting an occurrence of said event; (6) detecting an event keyword from said text file corresponding to said event detected in the event occurrence detecting step; (7) searching said database constructed in the database constructing step to retrieve said associated information corresponding to said event keyword detected in the event keyword detecting step; and (8) controlling displaying of said associated information retrieved in the searching step. The changes to Claim 7 are supported by the originally filed specification and do not add new matter.⁴

Regarding the rejection of Claim 7 under 35 U.S.C. § 103(a), the Office Action asserts that the '412 patent discloses everything in Claim 7 with the exception of user interactions as events, detecting an occurrence of an event, detecting an event keyword, searching a database to retrieve associated information, and controlling displaying of that associated information, and relies on the '681 patent to remedy those deficiencies.

The '412 patent is directed to a system for identifying information, including (1) multiple information sets each representing a portion of the information; and (2) multiple collators each independently deriving vector spaces from associated information sets and identifying concepts in the vector spaces, wherein the multiple collators independently

⁴ See, e.g., Figure 3 and the discussion related thereto in the specification.

identify information in the associated information sets according to the identified concepts in the vector spaces and compete against each other to identify relevant information in response to information queries. In particular, as shown in Figure 4, the '412 patent discloses a system in which information sources are processed using "grinders," "tanks," "mites," and "collators," so as to generate a set of indices for the information and to extract keywords from the document so as to organize the information from the information sources. Thus, the '412 patent discloses an intelligent query engine that uses machine learning techniques to facilitate the automated emergence of information spaces in which objects are represented as vectors of real numbers. Further, the '412 patent discloses that the system delivers information to users based on similarity measures applied to the representation of the objects in the information spaces.

However, as admitted in the outstanding Office Action, the '412 patent fails to disclose detecting an occurrence of an event, detecting an event keyword, searching the database constructed in the database construction step, and controlling display of the associated information retrieved in the searching step, as recited in amended Claim 7.

Further, Applicants respectfully submit that the '412 patent fails to disclose acquiring associated information for each important keyword of the existing keywords having a weight higher than a predetermined threshold, the associated information being obtained by accessing a search engine on the Internet using the important keyword as a search term, as recited in amended Claim 7. While the '412 patent discloses a system that analyzes documents, extracts keywords from those documents, and organizes the associated information space, the '412 patent is silent regarding acquiring associated information by accessing a search engine on the Internet using each important keyword as a search term, wherein the important keyword is obtained from a text file, as recited in amended Claim 7.

Rather, the '412 patent merely discloses "grinding" and extracting of information from a text file.

In particular, Applicants note that page 10 of the outstanding Office Action relies on column 9, lines 7-41 in the '412 patent as disclosing the computing step recited in Claim 7. However, Applicants note that while column 9 of the '412 patent discloses that "... words are assigned weights proportional to their frequency in a document...",⁵ this process is performed by a grinder 100 which generates the index log 2, as shown in Figure 7 of the '412 patent. Further, Applicants note that Claim 7 defines each important keyword as a keyword having a weight higher than a predetermined threshold, and that associated information for each important keyword (that has a weight higher than a predetermined threshold) is obtained by accessing the search engine on the Internet using each important keyword as a search term. However, Applicants note that the Office Action, in addressing the acquiring step recited in Claim 7 refers to various sections in column 7, 8, 9, 19, 21, 24, and 25 of the '412 patent.

However, Applicants note that the Office Action does not relate the weights assigned by the grinder 100 to the keywords to the claimed predetermined threshold or to the obtaining of associated information using a search engine on the Internet. Rather, the Office Action refers to the "liaisons" shown, for example, in Figures 4, 8, and 14A, but does not relate the liaisons to the weights assigned by the grinder 100, and does not cite a passage which states that when the weights assigned by the grinder 100 exceed a predetermined threshold, associated information is obtained by accessing a search engine on the Internet using each important keyword as a search term, as required by amended Claim 7. Rather, the Office Action appears to merely cite the passages that contain the word "threshold" within the '412 patent, but Applicants note that those passages are not related to the weights discussed in column 9 of the '412 patent.

⁵ '412 patent, column 9, lines 28-29.

For example, the passage in column 19 discusses whether a document having a “goodness” score exceeds a threshold for one or more collators to select that document. However, Applicants respectfully submit that this is not a disclosure that when a weight of a keyword exceeds a threshold, associated information is obtained by accessing a search engine on the Internet using the important key word as a search term, as required by Claim 7. Rather, the passage in column 19 of the ‘412 patent is concerned with whether a mite 106 determines that a candidate document should be distributed based upon its “goodness” score.

Further, Applicants note that use of the word “threshold” in column 21 of the ‘412 patent relates to whether object vectors are within a particular distance of centroid vectors, and that this disclosure is unrelated to the weights disclosed in column 9 of the ‘412 patent, and unrelated to keywords having a weight higher than a predetermined threshold, and obtaining associated information for each keyword having a weight higher than a predetermined threshold, as required by Claim 7.

The ‘681 patent is directed to a method for automatically providing remote notification of an ongoing event that includes detecting the event by receiving presently occurring data and analyzing the content of the data by using a data filter. In particular, the ‘681 patent is directed to a method for providing automatic remote notification of a locally detected event including designating at least one event as being of interest to a first user of a data network, monitoring the specified user-intended messages received via the data network for conveying message information to the first user; analyzing a content of the specified messages to determine whether the content is indicative of occurrence of one of the designated events; determining whether the first user is available to receive an automated event notification if the occurrence of an event is detected; automatically establishing a telecommunications link to a specified remote user device in response to a determination that

the first user is unavailable; and transmitting the automated event notification to the specified remote user communication device via the telecommunications link.

However, Applicants respectfully submit that the '681 patent fails to disclose acquiring associated information for each important keyword of the existing keywords having a weight higher than a predetermined threshold, the associated information being obtained by accessing a search engine on the Internet using each important keyword as a search term, as recited in amended Claim 7. Applicants respectfully submit that the '681 patent was not relied upon by the Examiner for disclosing the acquiring step recited in Claim 7.

Thus, no matter how the teachings of the '412 and '681 patents are combined, the combination does not teach or suggest at least acquiring associated information for each important keyword of the existing keywords having a weight higher than a predetermined threshold, the association information being obtained by accessing a search engine on the Internet using each important keyword as a search term, as recited in amended Claim 7. Accordingly, for the reasons stated above, Applicants respectfully submit that rejection of Claim 7 is rendered moot by the present amendment to that claim.

Independent Claim 8 recites limitations analogous to the limitations recited in Claim 7, and has been amended in a manner analogous to the amendment to Claim 7. Accordingly, for the reasons stated above for the patentability of Claim 7, Applicants respectfully submit that the rejection of Claim 8 is rendered moot by the present amendment to that claim.

Amended Claim 9 is directed to an information processing apparatus for displaying an animated agent on a display device and for displaying associated information related to a text file processed by a predetermined application program, comprising: (1) a processing detection device configured to detect, as an event, predetermined processing of said predetermined application program; (2) a keyword detection device configured to detect

keywords from said text file processed by said predetermined application program corresponding to said event detected by said processing detection device; (3) means for computing weights for said keywords based on use of occurrence frequency in the text file, and searching for said associated information for each important keyword of the keywords having a weight higher than a predetermined threshold by searching a database for a previously processed existing file corresponding to each important keyword; (4) an input device configured to input a command; (5) a command processing device configured to execute, in response to said command inputted by said input device, processing on said associated information; and (6) a display control device configured to display, in response to said event detected by said processing detection device, said animated agent onto said display device and changing a manner of displaying said animated agent in response to said command inputted by said input device. The changes to Claim 9 are supported by the originally filed specification and do not add new matter.

Regarding the rejection of Claim 9 under 35 U.S.C. § 103(a), the Office Action asserts that the '681 and '158 patents fail to disclose everything in Claim 9 with the exception of the claimed animated agent, and relies on the Lachman reference to remedy those deficiencies.

As discussed above, the '681 patent is directed to a method for automatically providing remote notification of an ongoing event that includes detecting the event by receiving presently occurring data and analyzing the content of the data by using the data filter.

However, as admitted in the outstanding Office Action, the '681 patent fails to disclose the animated agent recited in Claim 9.

Further, Applicants respectfully submit that the '681 patent fails to disclose means for searching for the associated information for each important keyword of the keywords having

a weight higher than a predetermined threshold by searching a database for a previously processed existing file corresponding to each important keyword, as recited in amended Claim 9.

The '158 patent is directed to a collection search system responsive to a user query regarding a collection of documents to provide a search report.

However, as admitted in the outstanding Office Action, the '158 patent fails to disclose the animated agent recited in Claim 9.

Further, Applicants respectfully submit that the '158 patent fails to disclose means for searching the associated information for each important keyword of the keywords having a weight higher than a predetermined threshold by searching a database for previously processed existing file corresponding to each important keyword, as recited in amended Claim 1. In particular, Applicants note that the Office Action cites to column 10, lines 16-45 as disclosing searching a database for a previously processed existing file corresponding to each important keyword, the important keyword being defined as a weight higher than a predetermined threshold. However, Applicants note that the passage in column 10 of the '158 patent discloses that when a frequency of occurrence exceeds a threshold a term is added to a word stop list such that subsequent occurrences of that term are effectively ignored. In other words, the '158 patent discloses merely discloses ignoring keywords that occur too frequently within a document since those words fail to have any contextual significance.⁶

The Lachman reference is directed to the use of character animation in computer user interfaces and discloses various animated agents used to assist a user in navigating a software program.

⁶ See '158 patent, column 10, lines 31-39.

However, Applicants respectfully submit that the Lachman reference fails to cure the deficiencies of the '158 and '681 patents, as discussed above. In particular, Applicants respectfully submit that the Lachman reference fails to disclose the means for searching recited in amended Claim 9.

Thus, no matter how the teachings of the '681 patent, the '158 patent, and the Lachman reference are combined, the combination does not teach or suggest means for searching for the associated information for each important keyword of the keywords having a weight higher than a predetermined threshold by searching a database for a previously processed existing file corresponding to each important keyword, as recited in amended Claim 9. Accordingly, Applicants respectfully submit that the rejection of Claim 9 is rendered moot and that Claim 9 patentably defines over any proper combination of the cited references.

Independent Claims 15 and 16 recite limitations analogous to the limitations recited in Claim 9, and have been amended in a manner analogous to the amendment to Claim 9. Accordingly, for the reasons stated above regarding Claim 9, Applicants respectfully submit that the rejections of Claims 15 and 16 are rendered moot by the present amendment to those claims.

Regarding the rejection of dependent Claims 2-6, 10, 11, and 17-20 under 35 U.S.C. § 103(a), Applicants respectfully submit that the Horvitz reference, the '681 patent, and the '412 patent fail to remedy the deficiencies of the Rhodes et al. reference, as discussed above. Accordingly, Applicants respectfully submit that the rejections of the above-noted dependent claims are rendered moot by the present amendment to Claims 1 and 9.

The present amendment also sets forth new Claim 21 for examination on the merits. New Claim 21, which depends from Claim 1, clarifies that the extraction device is configured to extract a plurality of keywords from the first document; and the search device is

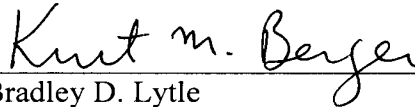
configured to select a first keyword from the plurality of keywords based on corresponding keyword weights of the keywords during a predetermined time period immediately prior to a time of the selection. No new matter has been added.⁷

Thus, it is respectfully submitted that independent Claims 1, 7-9, 15, and 16 (and all associated dependent claims) patentably define over any proper combination of the cited references.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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⁷ See Figure 6 and the discussed related thereto in the specification.